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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,851	04/20/2001	Donald C.D. Chang	PD-200277A	3026
20991	7590	11/04/2004	EXAMINER	
THE DIRECTV GROUP INC				NGUYEN, SON XUAN
PATENT DOCKET ADMINISTRATION RE/R11/A109				ART UNIT
P O BOX 956				PAPER NUMBER
EL SEGUNDO, CA 90245-0956				2664

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/839,851	CHANG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	SON X. NGUYEN	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03/04/2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8, 10-18 and 20-27 is/are rejected.
- 7) Claim(s) 9 and 19 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 April 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The Figure 2 and 3 are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figure 2 missing "Multiple beam antenna 200", Figure 3 missing "Router 312" specified in line 3 of page 12 of specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Robert et al (U.S 6,411,607), hereinafter referred to as Robert.

Regarding claim 1, Robert discloses a method of data transfer comprising the steps of: establishing multiple dynamic wireless linkages (linkages 3 of Figure 1) between a communications network based on an Internet protocol (Internet back channel system 10 of Figure 1) and a user terminal via a plurality of geo-stationary satellites (satellite 20 of Figure 1); and transferring datagrams conforming to the Internet protocol between the user terminal and the communications network over the multiple wireless linkages (see lines 6-10 of paragraph 0043).

Regarding claim 2, Robert discloses the communications network is the global Internet (Figure 1 shows the network is IP network).

Regarding claim 3, Robert discloses multiple wireless linkages are coupled to the communications network by RF communications base terminals connected to Internet nodes (Linkages 3, Satellite disk 31, Satellite receiver 32 and Router 36 of Figure 1).

Regarding claim 4, 5 and 6, Robert discloses user terminal assembles datagrams from data frames and fragments datagrams to data frames (Satellite receiver 32, Ethernet/Router card 34 and Modulator 26 of Figure 1).

Regarding claim 7, Robert discloses a communications system comprising: a plurality of geo-stationary satellites (Satellite 20 of Figure 1); a communications network based on an Internet protocol (Internet back channel system 10 of Figure 1); a plurality of Internet nodes (Router 36 and 22 of Figure 1) coupled to the communications network; a plurality of communications base terminals (Satellite disk 31 and Satellite receiver 32 of Figure 1) coupled to the Internet nodes and to the plurality of geostationary satellites; and a user terminal coupled to the plurality of geostationary satellites (Satellite 20 of Figure 1).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 8,10-11,18,20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert (U.S 6,411,607) in view of Wesel (U.S 6,708,029).

Regarding claims 8, 10-11 Robert disclose the user terminal comprises: a multiple beam antenna for receiving and transmitting signals (Satellite disks 28 and 31 of Figure 1) between the user terminal and the plurality of geo-stationary satellites (Satellite 20 of Figure 1); a plurality of amplifiers coupled to the multiple beam antenna; a plurality of bandpass filters coupled to the plurality of amplifiers (multiple beam antenna, amplifier, and bandpass filter are inherent of Satellite disk 31 of Figure 1); a modem (Satellite receiver 32 and Modulator 26 of Figure 1) coupled to the plurality of bandpass filters; a router & hub coupled to the modem; a transport layer coupled to the router & hub; and an estimation processor coupled to the hub & router and an external calibration information module.

Robert, however, fails to disclose an estimation processor coupled to the hub & router and an external calibration information module.

Wesel teaches the use of controller coupled to lookup table and input router (paragraph 37 and Figure 12).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify Robert's apparatus to incorporate a setup where controller is coupled to lookup table and input router, the motivation being that using the controller coupled to look up table and input router would provide more updates for routing table.

Regarding claims 18, 20-21 Robert disclose the user terminal comprises: a multiple beam antenna for receiving and transmitting signals (Satellite disks 28 and 31 of Figure 1) between the user terminal and the plurality of geo-stationary satellites (Satellite 20 of Figure 1); a plurality of amplifiers coupled to the multiple beam antenna; a plurality of bandpass filters coupled to the plurality of amplifiers (multiple beam antenna, amplifier, and bandpass filter are inherent of Satellite disk 31 of Figure 1); a modem (Satellite receiver 32 and Modulator 26 of Figure 1) coupled to the plurality of bandpass filters; a router & hub coupled to the modem; a transport layer coupled to the router & hub; and an estimation processor coupled to the hub & router and an external calibration information module.

Robert, however, fails to disclose an estimation processor coupled to the hub & router and an external calibration information module.

Wesel teaches the use of controller coupled to lookup table and input router (paragraph 37 and Figure 12).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify Robert's apparatus to incorporate a setup where controller is coupled to lookup table and input router, the motivation being that using the controller coupled to look up table and input router would provide more updates for routing table.

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6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert (U.S 6,411,607) in view of Wesel (U.S 6,708,029) and in further view of Hou (U.S 6,593,893).

Regarding claims 12-14 Robert and Wesel, as combined, disclose all the aspects of the claimed invention as set forth in the rejection of claim 8.

Robert and Wesel, however, fail to disclose the multiple beam antenna comprising a reflector and a plurality of feedhorns coupled to the reflector, the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector.

Hou teaches the multiple beam antenna comprising a reflector and a plurality of feedhorns coupled to the reflector (paragraph 17), the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector (paragraph 22 and Figure 4).

It would have been obvious to one ordinary skill in the art at the time the invention was made to further modify Robert's system to incorporate a setup where multiple beam antenna comprising a reflector and a plurality of feedhorns coupled to the reflector, the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector is used, the motivation being that using this multiple beam antenna would provide multiple dynamic wireless linkages.

7. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert (U.S 6,411,607) in view of Hou (U.S 6,593,893) and Wesel (U.S 6,708,029) and in further view of Dybdal (U.S 5,952,962).

Regarding claims 15-17, Robert, Wesel and Hou, as modified, disclose the system which has the multiple beam antenna comprising a reflector and a plurality of feedhorns coupled to the reflector, the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector.

Neither Robert nor Wesel nor Hou, however, disclose the tracking mechanism coupled to the multiple beam antenna, the tracking mechanism adjusting a position of each of the plurality of feedhorns independent, the tracking mechanism adjusting a position of the reflector to optimize overall data throughput.

Dybdal teaches the tracking mechanism coupled to the multiple beam antenna, the tracking mechanism adjusting a position of each of the plurality of feedhorns independent (paragraph 17 and Figure 1), the tracking mechanism adjusting a position of the reflector to optimize overall data throughput (paragraph 7).

It would have been obvious to one ordinary skill in the art at the time the invention was made to further modify Hou's antenna to incorporate a setup where the tracking mechanism is coupled to the multiple beam antenna, the tracking mechanism adjusts a position of each of the plurality of feedhorns independently, the tracking mechanism adjusts a position of the reflector to optimize overall data throughput, the motivation being that using the tracking mechanism would optimize overall data throughput.

8. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert (U.S 6,411,607) in view of Hou (U.S 6,593,893).

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Regarding claims 22-24, Robert discloses all the aspects of the claimed invention as set forth above.

Robert, however, fails to disclose the multiple beam antenna comprising a reflector and a plurality of feedhorns coupled to the reflector, the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector.

Hou teaches the multiple beam antenna comprising a reflector and a plurality of feedhorns coupled to the reflector (paragraph 17), the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector (paragraph 22 and Figure 4).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify Robert's apparatus to incorporate a setup where multiple beam antenna comprising a reflector and a plurality of feedhorns coupled to the reflector, the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector is used, the motivation being that using this multiple beam antenna would provide multiple dynamic wireless linkages.

9. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert (U.S 6,411,607) in view of Hou (U.S 6,593,893) and in further view of Dybdal (U.S 5,952,962).

Regarding claims 25-27, Robert and Hou, as combined, disclose the system which has the multiple beam antenna comprising a reflector and a plurality of feedhorns

coupled to the reflector, the reflector being a parabolic reflector and each of the plurality of feedhorns located on a focal plane of the reflector.

Neither Robert nor Hou, however, disclose the tracking mechanism coupled to the multiple beam antenna, the tracking mechanism adjusting a position of each of the plurality of feedhorns independent, the tracking mechanism adjusting a position of the reflector to optimize overall data throughput.

Dybdal teaches the tracking mechanism coupled to the multiple beam antenna, the tracking mechanism adjusting a position of each of the plurality of feedhorns independent (paragraph 17 and Figure 1), the tracking mechanism adjusting a position of the reflector to optimize overall data throughput (paragraph 7).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify Hou's antenna to incorporate a setup where the tracking mechanism is coupled to the multiple beam antenna, the tracking mechanism adjusts a position of each of the plurality of feedhorns independently, the tracking mechanism adjusts a position of the reflector to optimize overall data throughput, the motivation being that using the tracking mechanism would optimize overall data throughput.

### ***Allowable Subject Matter***

10. Claims 9 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Robert et al. (U.S 6,160,797), Satellite receiver/router, system, and method of use.
- b) Edgar et al. (U.S 6,266,540), Control interface protocol for the telephone sets for a satellite telephone system.
- c) Learner et al. (U.S 6,775,251), Satellite communication system providing multi-gateway diversity and improved satellite loading.
- d) Ronald F. Rosati (U.S 6,041,233), Method and system for providing global variable data rate connectivity in a satellite-based communications networks.
- e) Gilbert Dinkins (U.S 5,633,872), Interactive radio.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SON X. NGUYEN whose telephone number is 571-272-6048. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/26/04  
Son X. Nguyen

A handwritten signature in black ink, appearing to read "Son X. Nguyen".